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**DEPARTMENT OF HOMELAND SECURITY**  
**U.S. CUSTOMS AND BORDER PROTECTION**  
**NOTICE OF ISSUANCE OF FINAL DETERMINATION CONCERNING**  
**LASER-BASED MULTI-FUNCTION OFFICE MACHINES**

**AGENCY:** U.S. Customs and Border Protection, Department of Homeland Security.

**ACTION:** Notice of final determination.

**SUMMARY:** This document provides notice that U.S. Customs and Border Protection (“CBP”) has issued a final determination concerning the country of origin of laser-based multi-function office machines. Based upon the facts presented, CBP has concluded in the final determination that the assembly and programming operations together convey the essential character of the laser-based multi-function office machine, and it is at their assembly and programming where the last substantial transformation occurs. Therefore, when the laser-based multi-function office machines are assembled and programmed in Mexico, the country of origin for purposes of U.S. government procurement is Mexico.

**DATE:** The final determination was issued on December 21, 2011. A copy of the final determination is attached. Any party-at-interest, as defined in 19 C.F.R. § 177.22(d), may seek judicial review of this final determination on or before [insert 30 days from date of publication in the Federal Register].

**FOR FURTHER INFORMATION CONTACT:** Christina Kopitopoulos, Valuation and Special Programs Branch: (202) 325-0217.

**SUPPLEMENTARY INFORMATION:** Notice is hereby given that on December 21, 2011, pursuant to subpart B of part 177, Customs Regulations (19 C.F.R. Part 177, subpart B), CBP issued a final determination concerning the country of origin of laser-based multi-function office machines which may be offered to the U.S. Government under an undesignated government procurement contract. This final determination, HQ H185775, was issued under procedures set forth at 19 C.F.R. Part 177, subpart B, which implements Title III of the Trade Agreements Act of 1979, as amended (19 U.S.C. § 2511–18). In the final determination, CBP concluded that, based upon the facts presented, the assembly and programming of the office machines together convey the essential character of the laser-based multi-function office machines and it is at their assembly and programming where the last substantial transformation occurs. Therefore, when the laser-based multi-function office machines are assembled and programmed in Mexico, the country of origin for purposes of U.S. government procurement is Mexico.

Section 177.29, Customs Regulations (19 C.F.R. § 177.29), provides that a notice of final determination shall be published in the *Federal Register* within 60 days of the date the final determination is issued. Section 177.30, CBP Regulations (19 C.F.R. § 177.30), provides that any party-at-interest, as defined in 19 C.F.R. § 177.22(d), may seek judicial review of a final determination within

30 days of publication of such determination in the *Federal Register*.

**DATED:** December 21, 2011

Sandra L. Bell  
Executive Director  
Regulations and Rulings  
Office of International Trade

Attachment

**HQ H185775**

**December 21, 2011**

**OT:RR:CTF:VS** H185775 CK

**CATEGORY:** Marking

Carlos Halasz  
Hewlett-Packard Company  
8501 SW 152 Street  
Palmetto Bay, Florida 33157

**RE:** U.S. Government Procurement; Title III, Trade Agreements Act of 1979 (19 U.S.C. § 2511); Subpart B, Part 177, CBP Regulations; laser-based multi-function office machine

Dear Mr. Halasz:

This is in response to your correspondence of September 13, 2011, requesting a final determination on behalf Hewlett-Packard, pursuant to subpart B of part 177, U.S. Customs and Border Protection ("CBP") Regulations (19 C.F.R. § 177.21 *et seq.*). Under the pertinent regulations, which implement Title III of the Trade Agreements Act of 1979, as amended (19 U.S.C. § 2511 *et seq.*), CBP issues country of origin advisory rulings and final determinations as to whether an article is or would be a product of a designated country or instrumentality for the purpose of granting waivers of certain "Buy American" restrictions in U.S. law or practice for products offered for sale to the U.S. Government.

This final determination concerns the country of origin of HP LaserJet Enterprise 500 MFP M525 ("M525"). We note that Hewlett-Packard is a party-at-interest

within the meaning of 19 C.F.R. § 177.22(d)(1) and is entitled to request this final determination.

#### FACTS:

The finished M525 is a laser-based multi-function office machine that incorporates multiple functions, including printing, scanning, copying and faxing.

The major component of the M525 is the incomplete Print Engine. The complete print engine is the central mechanism of the M525 that performs printing. The incomplete print engine which is produced in Vietnam and is non-functional in this form consists of a metal frame, plastic skins, motors, controller board (supplier provided firmware), a laser scanning system, fuser, paper trays, cabling paper transport rollers, miscellaneous sensing and imaging systems.

The following assemblies are added to the incomplete print engine in Mexico to form the finished unit.

**Formatter Board:** The printer formatter is the main controller of the printer. It consists of a printed circuit board, industry standard components, and customized integrated circuits. The main function of the formatter is to receive input data from remote devices via different input ports, translate that data into a format that the print engine understands, and then send the data onto the print engine enabling the information to be successfully printed onto paper. The formatter is also responsible for providing command and control signals allowing the engine to start, run and stop motors in a manner that allows the paper to move from input devices to the designated output bin of the printer, while at the same time, putting the printed image on the paper. The image is constructed by the firmware that runs on the formatter, which tells the lasers how to place the image on the paper for proper resolution and image quality. The formatter operates the HP Embedded Web Server, which allows remote PC users to view the printer settings and make adjustments. It creates and stores critical and printer-unique calibration and configuration data, which ensure that the sub-systems have consistent measurements for paper size, page break, color reproduction and other standards. The country of origin of the formatter is China.

**Scanner/Automatic Document Feeder (ADF):** This subsystem controls scanning functions based on communication from the formatter. It consists of metal frames, plastic skins, paper transport rollers and control surfaces, controller/motor driver printed circuit assemblies, motors, imaging assembly, glass, cabling, and miscellaneous sensors. The scanner is designed and developed in the US and the assembly is produced in the US.

**Control Panel:** This assembly controls the user interface panel and accepts user inputs through the touch screen interaction. The panel also provides interface ports with other forms of customer interaction. It consists of a plastic frame, LCD

screen, touch panel, controller board (the firmware is developed and written at HP in the US) miscellaneous buttons, connectors, and cabling. The control panel communicates with the formatter to execute user commands. It is designed in the US and the panel is manufactured in China.

Fax Card: This consists of a printed circuit board, industry standard components (modem with supplier furnished firmware) and speaker. The fax card allows the M525 to be connected to a phone line and to transmit or receive fax messages.

Hard Disk Drive/Solid State Drive: This is where data is stored. The hard disk drive is produced in Malaysia, the solid state drive in China. The drives consist of a metal frame, disk media or solid state memory, and a controller board (supplier provided firmware).

Firmware: The term refers to fixed internal programs that control electronic devices. The firmware that is installed in Mexico is what enables all of the M525's functionality, whether hardware or software. The machine is non-functional without the firmware. The firmware includes both programs for lower level hardware control and higher level operating system functionality. The control panel, formatter and other sub-systems have their own firmware for operation. The firmware installed in Mexico is developed and written in the US, although testing and de-bugging is carried out outside the US.

Minor components and accessories that are also part of the process in Mexico include: keyboard (some units only), stapler (some units only), cables, fasteners, nameplates and labels, plastics, power supply, toner cartridge, and CD's/manuals, all of which are sourced from various countries.

The foregoing assemblies and components are processed in Mexico by skilled labor:

- Formatter sub-assembly:
  - The formatter printed circuit assembly may be integrated onto a sheet metal tray with multiple screws.
  - The external memory device is installed onto the formatter.
  - The fax card is installed onto the formatter
  - Cables are routed.
- Using a lift the incomplete print engine is loaded on a pallet.
- The scanner/ADF assembly is set into place atop the engine assembly. The two units are mated together using screws and cables.
- The hinge assembly between the engine and the scanner/ADF assembly is secured with screws and side panels are installed.
- The control panel is attached to a hinge on the scanner/ADF assembly, and the panel is cabled to the engine.

- The formatter assembly is installed onto the engine with several screws, and then connected with cables.
- When needed a keyboard is attached to the unit.
- The firmware for all sub-systems (engine, scanner, ADF, fax, control panel, output devices) is downloaded onto the hard drive or solid state drive.

Testing is done with skilled labor and consists of:

- The finished units are moved to test stations and are connected to computers. The testing software is developed and written in the US. Some tests are automated and some performed by people.
- As part of the testing process, hardware components are verified, the firmware is updated as necessary, the functionality is checked, print and copy quality are examined.
- The M525's operating system- a type of firmware is installed onto the hard and solid state drives. Settings for the product are made according to the option and country the unit is intended to be shipped to. Configuration settings are made for language, paper, and functionality.

The following packaging and accessories are performed also:

- The finished unit is inspected for correct assembly, cosmetic issues, print/copy quality, etc.
- Shipping locks and tape are added to the unit.
- The printer is bagged and shipping foam is added.
- Accessories (e.g., manuals, CD's, power supply) are added to the packaging.
- The finished product and the accessories are packaged in a box container.
- Box containers are palletized and loaded into containers for shipment to a distribution center.

## **ISSUE:**

What is the country of origin of the HP LaserJet Enterprise 500 MFP M525 for the purpose of U.S. government procurement?

## **LAW AND ANALYSIS:**

Pursuant to subpart B of part 177, 19 C.F.R. § 177.21 *et seq.*, which implements Title III of the Trade Agreements Act of 1979, as amended (19 U.S.C. § 2511 *et seq.*), CBP issues country of origin advisory rulings and final determinations as to whether an article is or would be a product of a designated country or instrumentality for the purposes of granting waivers of certain "Buy American" restrictions in U.S. law or practice for products offered for sale to the U.S. Government.

Under the rule of origin set forth under 19 U.S.C. § 2518(4)(B):

An article is a product of a country or instrumentality only if (i) it is wholly the growth, product, or manufacture of that country or instrumentality, or (ii) in the case of an article which consists in whole or in part of materials from another country or instrumentality, it has been substantially transformed into a new and different article of commerce with a name, character, or use distinct from that of the article or articles from which it was so transformed.

*See also*, 19 C.F.R. § 177.22(a).

In order to determine whether a substantial transformation occurs when components of various origins are assembled into completed products, CBP considers the totality of the circumstances and makes such determinations on a case-by-case basis. The country of origin of the item's components, extent of the processing that occurs within a country, and whether such processing renders a product with a new name, character, and use are primary considerations in such cases. Additionally, factors such as the resources expended on product design and development, extent and nature of post-assembly inspection and testing procedures, and the degree of skill required during the actual manufacturing process may be relevant when determining whether a substantial transformation has occurred. No one factor is determinative.

In HQ H125975 (January 19, 2011), CBP examined the country of origin of an electronic data storage system that ensured data integrity and availability. The system consisted of an operating system/firmware developed in the United States, a controller assembly, a mounting assembly, hard drives, slot drive module assembly and cabinet assembly. These units and components were assembled in Mexico, where the US-origin software was downloaded onto the finished unit. Testing was also conducted in Mexico. CBP, in determining the country of origin was Mexico, focused on the final assembly and the fact that the various components originated from multiple countries.

In HQ H082476 (May 11, 2010), CBP addressed the country of origin of certain mass data storage devices. The devices included a central processing unit, an application specific integrated circuit, a capacitor and resistors, an electrically erasable programmable read-only memory, a motherboard, a hard drive, chassis, memory module and other components. The items were assembled in the US, where US-developed proprietary application and firmware was also installed. The country of origin was determined to be the US.

In this case, nonfunctioning assemblies and components from various countries are shipped to Mexico. In Mexico the assemblies and components are

assembled and production on the finished product is conducted by skilled laborers. The US-origin firmware is downloaded and the M525 is programmed, so that it becomes functional. The assembled finished product is tested in Mexico, and prepared for shipping to its ultimate destination. Applying the above-cited precedent, to the facts in this case, we find that a substantial transformation of the various components occurs in Mexico, and that the assembly of the materials from various countries results in the HP LaserJet Enterprise 500 MFP M525. Therefore, the country of origin of the M525 is Mexico.

**HOLDING:**

Based on the facts provided, the assembly and programming operations performed in Mexico on the components of the M525 give rise to a new and different article, the HP LaserJet Enterprise 500 MFP M525. As such, the M525 is to be considered a product of Mexico for purposes of U.S. Government procurement.

Notice of this final determination will be given in the Federal Register, as required by 19 C.F.R. § 177.29. Any party-at-interest other than the party which requested this final determination may request, pursuant to 19 C.F.R. § 177.31, that CBP reexamine the matter anew and issue a new final determination. Pursuant to 19 C.F.R. § 177.30, any party-at-interest may, within 30 days of publication of the Federal Register Notice referenced above, seek judicial review of this final determination before the Court of International Trade.

Sincerely,

Sandra L. Bell, Executive Director  
Regulations and Rulings  
Office of International Trade